

CLASS 291, TRACK SANDERS**SECTION I - CLASS DEFINITION**

Means for applying sand or like material to vehicle-wheel treads or to vehicle-tracks, such as automobile-roads or railway-rails, or to both the wheel-treads and tracks, for the purpose of increasing the tractive effect between such wheels and roads or rails.

SECTION II - REFERENCES TO OTHER CLASSES**SEE OR SEARCH CLASS:**

- 118, Coating Apparatus, appropriate subclasses for coating apparatus, per se, and especially subclasses 308+ for apparatus for projecting particulate material on work pieces.
- 222, Dispensing, for dispensing apparatus in general and see the classes noted in sections 12, 16, and 17 of the class definition.
- 239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 650+ for vehicles the sole purpose of which is to distribute sand on highways for use by other vehicles, and comprising a container for nonfluid material (sand) and means to scatter or strew the material over an extended area.

SUBCLASSES

- 1** Track-sanders not specifically provided for below.
- 2** The sand-dispensing device is automatically operated by the slipping or skidding of a traction-wheel or the relative slipping of two or more traction-wheels.
- 3** Devices in which the sand is displaced and propelled or after gravity release is propelled through the delivery-pipe by either air, steam, water, or engine exhaust-gases.

SEE OR SEARCH CLASS:

- 222, Dispensing, subclasses 630+ for dispensers involving fluid flow discharge.
- 406, Conveyors: Fluid Current.
- 451, Abrading, subclasses 75+ for a sand-blast apparatus, generally.

- 4** The cinders or smoke and cinders from a steam-locomotive smoke-stack are utilized instead of sand.
- 5** Reversing means for fluid-pressure sand-delivery apparatus to effect track-sanding in front of or at the rear of the traction-wheels at will.
- 6** The sand-blast trap has a movable valve for determining which delivery-pipe is to be used and the other cut out.
- 7** Supplemental attachments for fluid sand-delivery apparatus, so that in case of absence of or failure of fluid-pressure or at will a gravity sand-feed may be thrown into operation.
- 8** The gravity-feed pipe has a cut-off valve and the sand-blast feed is through a by-pass around the gravity cut-off valve.
- 9** The sand-trap is located either in the side walls or below the floor of the sand-dome and is swung in a vertical plane to clear the opening to the discharge-pipe for gravity feed.
- 10** The sand-trap, usually on the floor of the sand-dome, is moveably mounted and is swung horizontally to uncover the sand-outlet for gravity operation.
- 11.1** **Including sand trap:**
This subclass is indented under subclass 3. Service comprising a retaining obstruction or horizontal passage to which the sand is delivered for engagement thereat by the air, steam, water, engine exhaust gas or other fluid. The fluid moves the sand over the obstruction or along the passage into the delivery pipe.
- 11.2** **Multiple fluid inlets for delivery pipe:**
This subclass is indented under subclass 11.1. Device having two openings or nozzles through which the fluid flows to engage and move the sand to or through the delivery pipe.
 - (1) Note. A service must have two openings or nozzles associated with a single, common delivery pipe for inclusion in this subclass.
 - (2) Note. In a device of this subclass, the fluid can flow from the two openings or

- nozzles concurrently or at different times. Devices having a particular fluid delivery nozzle in combination with a cleanout blast nozzle or stirring nozzle are included in this subclass.
- (3) Note. A device in which fluid flowing from one opening or nozzle induces additional flow from a second opening or nozzle is included in this subclass.
- 11.3 Specified means to alter inlet fluid flow:**
This subclass is indented under subclass 11.1. Device wherein significance is attributed to means to change the character of a flowing fluid prior to its engagement with the sand.
- (1) Note. The character of a flowing fluid may be changed by altering the flow rate, the location of the flow, etc.
- (2) Note. A device comprising a mere valve or control means located upstream of the trap which changes the character of the fluid flow is not included in this subclass unless particular structure of the valve or control means is provided or unless particular valve or control means operation or structure is recited.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
11.2, for fluid delivery devices having a sand-trap and multiple fluid inlets for propelling sand to or through a delivery pipe, particularly those devices wherein fluid flow from the two inlets is adjusted interdependently.
- 12** Movable mechanical cleaning elements, as wires or pins, for removing sand from the blast-nozzles in sand-traps.
- 13** Special forms of ports in blast-nozzles to impart a special form to the air-jet or to prevent sand from backing up into the blast-nozzle and screens or strainers for preventing the sand from backing up through the blast-nozzles.
- 14** The movement of the brake or engineer's valve handle at a determined point in its movement engages an abutment, which operates the control-valve of fluid sand-delivery apparatus or the sand-feeding device in a gravity sand apparatus or opens a port to control the sand-feeding device.
- 15** The movement of some valve other than the engineer's brake-valve or of some movable member of a brake system operates the control-valve of a fluid-operated sanding device or a sand-feeding device in a gravity sanding apparatus.
- 16** Hand-operated valves for control of fluid-pressure sanders.
- 17** Sound-producing devices, air-blowers, or indicators to give warning as to the operation of the sand-delivery mechanism.
- 18** An air or steam jet discharges into the top of the hopper for effecting pressure on the mass of sand or discharges into the mass of sand for the purposes of heating, drying, or breaking up caked sand. This subclass does not include devices for blowing sand out of the hopper.
- 19** Heating devices for heating or drying the sand, the compressed air, or the sand-delivery apparatus, as by hot air, gas-engine exhaust, etc.
- SEE OR SEARCH CLASS:
222, Dispensing, subclass 113, 131, and 146.1+ for other dispensers combined with heaters.
- 20** Electric-resistance heaters for sand, air, sand-hoppers, and delivery-pipes.
- SEE OR SEARCH CLASS:
222, Dispensing, subclass 333 for electric motor operated impelling devices for dispensers.
- 21** Steam chambers and pipes for heating sand and sand-delivery pipes by radiation.
- SEE OR SEARCH CLASS:
222, Dispensing, subclass 334 for fluid motor operated impellers for dispensers.
- 22** The sand-dispensing mechanism is driven by power, as by connection with a car wheel or axle.

- SEE OR SEARCH CLASS:
222, Dispensing, subclasses 611.1+ for ambulant dispensers adapted to travel on rails or tracks, and subclasses 613+ for ground wheel operated dispensers.
- 23** The sand is dispensed by the operation of an electric motor or solenoid.
- 24** The sand-dispensing mechanism is operated by a rotary or reciprocating pneumatic motor.
- 25** Devices for releasing the sand so that it may fall by gravity to the wheel or track. The term "sand-feeders" is also used to include devices for stirring up sand in the hoppers preliminary to feeding it out.
- SEE OR SEARCH CLASS:
222, Dispensing, appropriate subclasses for dispensers in general.
- 26** Sand-feeding apparatus operable at will for delivering sand either in front of or behind the vehicle traction-wheels.
- 27** The sand is fed to the delivery-pipe by a moving-chain feed.
- 28** The sand releasing and stirring members have an angular to-and-fro movement about axes at right angles to the plane of rotation. The releasing members are hinged doors, cylindrical segments, recessed or smooth, or of the perforated-plug-valve type.
- 29** The pivoted cups cap the hopper discharge-openings.
- 30** The entire sand-hopper is tilted to cause a discharge of the sand.
- 31** The pipes for delivering sand to the track are hinged adjacent the hoppers, are flexible, or are bodily movable, so that when the pipes are moved or bent the sand-discharge is cut off.
- 32** Rotary plates and cylindrical members adapted to rotate either continuously in the same direction or through a complete revolution. This subclass also includes centrifugal sowers.
- 33** Sand mixers or discharge devices of helical or screw form.
- 34** Sand-discharging and mixing plates or members having rectilinear sliding movement in the sides or bottoms of the sand-hoppers.
- 35** Plates with pivot-axes at right angles to the plates, so that the plane of the plate and its plane of movement are the same.
- 36** The plungers pass upwardly into the interior of the sand-hoppers and so are usually combined mixers and discharge-valves.
- 37** Same as 36 with addition of means for giving the plunger a turning movement as it moves up and down in the hopper.
- 38** Details of sand-hoppers not otherwise classified below.
- 39** Sand-reservoirs combined with the wheel-guards of automobiles.
- 40** Dome-shaped sand -reservoirs located on top of steam-locomotive boilers.
- 41** Details of sand-delivery spouts and pipes not otherwise classified below.
- 42** Movable devices inside the sand-pipes for cleaning them.
- SEE OR SEARCH CLASS:
222, Dispensing, subclasses 148+ for other dispensers combined with a cleaner.
- 43** A current of air or steam is blown through the delivery-pipe. In case of a delivery-pipe in fluid sanding system the cleaning-current is additional to the sand, air, or steam blast for moving the sand.
- 44** Flexible and articulated delivery-pipes designed to accommodate relative movement between traction-wheel frames and other parts of the vehicle due to relative vertical movements of such parts or to relative angular movement when rounding curves.

SEE OR SEARCH CLASS:

222, Dispensing, subclasses 527+ for other flexible dispenser outlet pipes or nozzles.

- 45** A plurality of sections of sand-delivery pipes having sliding connection with each other.

SEE OR SEARCH CLASS:

222, Dispensing, subclass 523 for other telescopic delivery pipes or nozzles.

- 46** Details or nozzles, such as sleeves, inserts, and tip forms.

SEE OR SEARCH CLASS:

222, Dispensing, subclasses 566+ for other dispenser nozzles.

- 47** This includes nozzle-tips pivoted to the pipe adjacent the wheel or track.

SEE OR SEARCH CLASS:

222, Dispensing, subclasses 526+ for other movable dispenser nozzles and see the notes for other subclasses having such subject matter, subclasses 533+ having swingable nozzles.

- 48** Devices for preventing the passage of pebbles or coarse foreign matter to the sand-delivery devices.

END